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**ESTABLISHMENT OF MANGO PLANTS WITH LIMITED WATER
APPLICATION UNDER RAINFED CONDITIONS IN THE LOWER SHIVALIKS
OF PUNJAB**

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ABSTRACT

There is need to develop techniques for the establishment of fruit trees with limited irrigation under lower Shivaliks of Punjab. The present study deals with the establishment of mango plants with five treatments i.e. (i) through pitcher application of 12240 ml water at 36 days intervals, (ii) direct application of 1360 ml water at 4 days interval, (iii) direct application of 2720 ml water at 8 days interval, (iv) direct application of 5440 ml water at 12 days interval and (v) no irrigation (control). Seedling mango grown *in situ*, transplanted seedling and graft of Dusheri mango were used in this study. In pitcher irrigation, 100 % survival rate was recorded *in situ* sowing of stones and transplanted seedlings, while 80 % survival was recorded in transplanted Dusheri plants and 40 % when sown *in situ*. Plant height and stem girths were similar in case of *in situ* sown and transplanted seedlings. However, both height and stem girth were better in transplanted Dusheri plants. The results of the investigation suggest that either plant be established with pitcher irrigation or alternatively direct sowing of stones and establishment of seedlings with subsequent grafting *in situ* could help in better establishment of mango groves under rainfed conditions of the lower Shivaliks of the Punjab state.